S/N To be assigned PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Viero	Examiner:	To be assigned
Serial No.:	To be assigned	Group Art Unit:	To be assigned
Filed:	11/6/01	Docket No.:	975.377USW1
Title:	RANDOM ACCESS CONTROL METHOD AND SYSTEM		

CERTIFICATE UNDER 37 C.F.R. 1.10:
'Express Mail' mailing number: EL887039097US
Date of Deposit: November 6, 2001
The undersigned hereby certifies that this Transmittal Letter and the paper or fee, as described herein, are being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

By: Kari Arnold
Kari Arnold

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

ABSTRACT

Please insert the attached abstract into the application as the last page thereof.

CLAIMS

Please cancel claims 1-33 and add new claims 34-66 as follows. A clean copy of the new claims is included below.

34. (NEW) A method for performing random access in a mobile communication network having a base transceiver station and a plurality of mobile stations, comprising the steps of:

a) transmitting a parameter defining allowed access slots used between said base transceiver station and a mobile station to said mobile station;

b) determining said allowed access slots at said mobile station based on said parameter; and

c) using at least one of said determined allowed access slots for performing a random access operation to said base transceiver station.

35. (NEW) A method according to claim 34, wherein said parameter is transmitted via a broadcast channel.

36. (NEW) A method according to claim 35, wherein said broadcast channel is the BCH channel of a WCDMA system.

37. (NEW) A method according to claim 35, wherein said random access is performed via the PRACH uplink channel and the AICH downlink channel of the WCDMA system.

38. (NEW) A method according to claim 1, wherein said parameter defines a subset of available access slots of said mobile communication network.

39. (NEW) A method according to claim 38, wherein said subset is determined by another parameter transmitted from said base transceiver station to said mobile station.

40. (NEW) A method according to claim 39, wherein said other parameter is a timing parameter defining a transmission timing of an uplink access slot.

41. (NEW) A method according to claim 39, wherein said other parameter is transmitted via a broadcast channel.

42. (NEW) A method according to claim 39, wherein the bit number of said parameter is changed in dependence on said other parameter.

43. (NEW) A method according to claim 42, wherein a transmission of a preamble signature or an acquisition indication is disabled in dependence of the value of said parameter.

44. (NEW) A method according to claim 42, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot.

45. (NEW) A method according to claim 44, wherein said index is calculated by using the equation

$$i = 3 \cdot N + (F \text{ modulo } 3)$$
$$\text{where } 0 \leq N \leq 2,$$

wherein F and N are integer numbers, and F denotes said frame number, and wherein only access slots having indices within the range 0 to 7 are valid.

46. (NEW) A method according to claim , wherein said index is calculated by using the equation

$$i = 4 \cdot N + (\Gamma \text{ modulo } 4)$$
$$\text{where } 0 \leq N \leq 3,$$

wherein Γ and N are integer numbers, and Γ denotes a frame number indicating two consecutive ones of said frame numbers of said frame used for transmitting an uplink access slot, and wherein only access slots having indices within the range 0 to 14 are valid.

47. (NEW) A method according to claim 45, wherein said parameter determines an offset to be added to said calculated index.

48. (NEW) A method according to 34, wherein an index of an allowed uplink access slot is determined on the basis of the value of said parameter irrespective of a frame number of a frame used for transmitting an uplink access slot.

49. (NEW) A method according to claim 34, wherein an allowed downlink slot is determined by adding a predetermined value to an index of a received uplink slot.

50. (NEW) A method according to claim 49, wherein said predetermined value is selected in accordance with a timing parameter defining a transmission timing of said uplink slot.

51. (NEW) A method according to claim 34, wherein bit values of a binary expression of said parameter determines a combination of calculated indices obtained for other values of said parameter, said other values corresponding to the binary weights of said binary expression.

52. (NEW) A system for performing random access in a mobile communication network, comprising:
a) a network element **(10)** arranged for transmitting a parameter defining allowed access slots; and
b) a plurality of mobile stations **(20)** arranged for receiving said transmitted parameter, for determining said allowed access slots based on said received parameter, and for using at least one of said determined allowed access slots for performing a random access operation to said base transceiver station **(10).**

53. (NEW) A system according to claim 52, wherein said network element is a WCDMA base transceiver station **(10)** and said mobile station **(20)** is a WCDMA mobile station.

54. (NEW) A network element for a mobile communication network comprising a plurality of mobile stations **(20),** comprising:

a) setting means **(14)** for setting a parameter defining allowed access slots for performing a random access operation; and
b) transmitting means **(11)** for transmitting said parameter to said plurality of mobile stations **(20).**

55. (NEW) A network element according to claim 54, wherein said network element is a WCDMA base transceiver station **(10).**

56. (NEW) A network element according to claim 54, wherein said transmitting means **(11)** is arranged to transmit said parameter via a broadcast channel.

57. (NEW) A network element according to claim 54, wherein said setting means **(14)** is arranged to set said parameter in dependence on a timing parameter value defining a transmission timing of an uplink access slot in said random access operation.

58. (NEW) A mobile station for a mobile communication network having at least one network element **(10)** allowing a random access operation, comprising:
a) receiving means **(21)** for receiving a parameter defining allowed access slots for said random access operation from said network element **(10);**
b) determining means **(23)** for determining said allowed access slots based on said received parameter; and
c) transmitting means **(21)** for transmitting a random access message to said network element **(10)** using at least one of said determined allowed access slots.

59. (NEW) A mobile station according to claim 58, wherein said receiving means **(21)** is arranged to receive said parameter via a broadcast channel.

60. (NEW) A mobile station according to claim 59, wherein said determining means **(23)** is arranged to determine said allowed access slots on the basis of said received parameter and a timing parameter received via said broadcast channel.

61. (NEW) A mobile station according to claim 58, wherein said determining means **(23)** is arranged to calculate an index of an allowed uplink access slot on the basis of the value of said received parameter and a frame number of a frame used for transmitting an uplink access slot.

62. (NEW) A mobile station according to claim 58, wherein said determining means **(23)** is arranged to determine an index of an allowed uplink access slot on the basis of the value of said parameter irrespective of a frame number of a frame used for transmitting an uplink access slot.

63. (NEW) A mobile station according to claim 58, wherein a selection means **(24)** is provided for randomly selecting from allowed access slots determined by said determining means **(23)** an uplink access slot to be used for transmitting a preamble of said random access message.

64. (NEW) A mobile station according to claim 63, wherein consecutive preambles are transmitted a predetermined number of access slots apart.

65. (NEW) A mobile station according to claim 64, wherein said predetermined number depends on a timing parameter received by said receiving means **(21).**

66. (NEW) A mobile station according to claim 64, wherein said selection means **(24)** is arranged to perform said random selection any time a preamble needs to be transmitted.

REMARKS

The above preliminary amendment is made to insert an abstract page into the application and to enter new claims 34-66.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at 952-912-0527.

Respectfully submitted,

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Date: November 6, 2001

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